

5' GCT CCC CGC GGC GGC TGG CGT CGG GAA AGT ACA GTA AAA	36	45	54
		AGT CCG AGT GCA GCC	
9	18		
63	72	81	90
GCC GGG CGC AGG ATG GGA TCC GGC TCC AGC TAC CGG			
	M G S	G S S	Y R
117	126	135	144
CTG GAC ATC GAT GGA CGC ATT CAG AAG GTA ATC TTC AGC			
L D I D G R I Q K V I F S			
171	180	189	198
AGC GAC ATC ATG GAC CTG TTC TGC ATC GCC ACC GGC CTG			
S D I M D L F C I A T G L			
225	234	243	252
ATC TCC CTG CTG ACC ACC GAC GAC GCC ATG GTC TCC ATC			
I S L L T T D D A M V S I			
279	288	297	306
GCG AAT TCA GAA CGC ACT CCG TAC AAA GTG AGA CCT GTG			
A N S E R T P Y K V R P V			
333	342	351	360
TCC GCT GGT GTC GAG GAC AAG AGA ACC ACA AGC CGT GGC			
S A G V E D K R T T S R G			

FIGURE1A



387	396	405	414	423	432
CCA CTG AGG GAC AGA CGG GTT GTG GGC CTG GAG CAG CCC CGG AGG GAA GGA GCA					
P L R D R R R V V G L E Q P R R E G A					
441	450	459	468	477	486
TTT GAA AGT GGA CAG GTA GAG CCC AGG CCC AGA GAG CCC CAG GGC TGC TAC CAG					
F E S G G Q V E P R P R E E P Q G C Y Q					
495	504	513	522	531	540
GAA GGC CAG CGC ATC CCT CCA GAG AGA GAA GAA TTA ATC CAG AGC GTG CTG GCG					
E G Q R I P P E P E R E E L I Q S V L A					
549	558	567	576	585	594
CAG GTT GCA GAG CAG TTC TCA AGA GCA TTC AAA ATC AAT GAA CTG AAA GCT GAA					
Q V A E Q F S R A F K I N E L K A E					
603	612	621	630	639	648
GTT GCA AAT CAC TTG GCT GTC CTA GAG AAA CGC GTG GAA TTG GAA GGA CTA AAA					
V A N H L A V L E K R V E L E G L K					
657	666	675	684	693	702
GTG GTG GAG ATT GAG AAA TGC AAG AGT GAC ATT AAG AAG ATG AGG GAG GAG CTG					
V V E I E K C C K S D I K K M R E E L					
711	720	729	738	747	756
GCG GCC AGA AGC AGG ACC AAC TGC CCC TGT AAG TAC AGT TTT TTG GAT AAC					
A A R S S R T N C P C K Y S F L D N					

FIGURE 1B

765	CAC AAG AAG TTG ACT CCT CGA CGC GAT GTT CCC ACT TAC CCC AAG TAC CTG CTC	774	783	792	801	810
H K K L T P R R D V P T Y P K Y L L						
819	TCT CCA GAG ACC ATC GAG GCC CTG CGG AAG CCG ACC TTT GAC GTC TGG CTT TGG	828	837	846	855	864
S P E T I E A L R K P T F D V W L W						
873	GAG CCC AAT GAG ATG CTG AGC TGC CTG GAG CAC ATG TAC CAC GAC CTC GGG CTG	882	891	900	909	918
E P N E M L S C L E H M Y H D L G L						
927	GTC AGG GAC TTC AGC ATC AAC CCT GTC ACC CTC AGG AGG TGG CTG TTC TGT GTC	936	945	954	963	972
V R D F S I N P V T L R R W L F C V						
981	CAC GAC AAC TAC AGA AAC CCC TTC CAC AAC TTC CGG CAC TGC TTC TGC GTG	990	999	1008	1017	1026
H D N Y R N N P F H N F R H C F C V						
1035	GCC CAG ATG ATG TAC AGC ATG GTC TGG CTC TGC AGT CTC CAG GAG AAG TTC TCA	1044	1053	1062	1071	1080
A Q M M Y S M V W L C S L Q E K F S						
1089	CAA ACG GAT ATC CTG ATC CTA ATG ACA GCG GCC ATC TGC CAC GAT CTG GAC CAT	1098	1107	1116	1125	1134
Q T D I L I L M T A A I C H D L D H						

FIGURE 1C

1143	1152	1161	1170	1179	1188
CCC GGC TAC AAC AAC ACG TAC CAG ATC AAT GCC CGC ACA GAG CTG GCG GTC CGC					
P G Y N N T Y Q I N A R T E L A V R					
1197	1206	1215	1224	1233	1242
TAC AAT GAC ATC TCA CCG CTG GAG AAC CAC CAC TGC GCC GTG GCC TTC CAG ATC					
Y N D I S P L E N H H C A V A F Q I					
1251	1260	1269	1278	1287	1296
CTC GCC GAG CCT GAG TGC AAC ATC TTC TCC AAC ATC CCA CCT GAT GGG TTC AAG					
L A E P E C N I F S N I P P D G F K					
1305	1314	1323	1332	1341	1350
CAG ATC CGA CAG GGA ATG ATC ACA TTA ATC TTG GCC ACT GAC ATG GCA AGA CAT					
Q I R Q G M I T L I L A T D M A R H					
1359	1368	1377	1386	1395	1404
GCA GAA ATT ATG GAT TCT TTC AAA GAG AAA ATG GAG AAT TTT GAC TAC AGC AAC					
A E I M D S F K E K M E N F D Y S N					
1413	1422	1431	1440	1449	1458
GAG GAG CAC ATG ACC CTG CTG AAG ATG ATT TTG ATA AAA TGC TGT GAT ATC TCT					
E E H M T L L K M I L I K C C D I S					
1467	1476	1485	1494	1503	1512
AAC GAG GTC CGT CCA ATG GAA GTC GCA GAG CCT TGG GTG GAC TGT TTA TTA GAG					
N E V R P M E V A E P W V D C L L E					

FIGURE 1D

1521	1530	1539	1548	1557	1566
GAA TAT TTT	ATG CAG AGC GAC CGT GAG AAG TCA GAA GGC CTT CCT GTG GCA CCG				
E Y F M Q S D R E K S E G L P V A P					
1575	1584	1593	1602	1611	1620
TTC ATG GAC CGA GAC AAA GTG ACC AAG GCC ACA GCC CAG ATT GGG TTC ATC AAG					
F M D R D K K V T K A T A Q I G F I K					
1629	1638	1647	1656	1665	1674
TTT GTC CTG ATC CCA ATG TTT GAA ACA GTG ACC AAG CTC TTC CCC ATG GTT GAG					
F V L I P M F E T V T K L F P M V E					
1683	1692	1701	1710	1719	1728
GAG ATC ATG CTG CAG CCA CTT TGG GAA TCC CGA GAT CGC TAC GAG GAG CTG AAG					
E I M L Q P L W E S R D R Y E E L K					
1737	1746	1755	1764	1773	1782
CGG ATA GAT GAC GCC ATG AAA GAG TTA CAG AAG AAG ACT GAC AGC TTG ACG TCT					
R I D D A M K E L Q K K T D S L T S					
1791	1800	1809	1818	1827	1836
GGG GCC ACC GAG AAG TCC AGA GAG AGA AGC AGA GAT GTG AAA AAC AGT GAA GGA					
G A T E K S R R E R S R D V K N S E G					
1845	1854	1863	1872	1881	1890
GAC TGT GCC TGA GGA AAG CCG GGG GCG TGG CTG CAG TTC TGG ACG GGC TGG CCG					
D C A					

FIGURE 1E

1899	1908	1917	1926	1935	1944
AGC TGC GCG GGA TCC TTG TGC AGG GAA GAG CTG CCC TGG GCA CCT GGC ACC ACA					
1953	1962	1971	1980	1989	
AGA CCA TGT TTT CTA AGA ACC ATT TTG TTC ACT GAT ACA AAA AAA AAA AA 3'					

FIGURE 1F



118	R	R	E	G	A	F	E	S	G	Q	V	-	-	-	-	-	-	-	-	-	-	-	E	P	R	P	R	E	P	Q	G	C	Y	Q	E	G	Q	R	I	P	PDE9A		
200	I	R	H	Y	-	V	S	I	I	R	V	C	N	G	N	N	K	A	E	K	I	S	E	C	V	Q	S	D	T	R	T	D	N	Q	T	G	K	H	K	D	PDE8A		
103	Q	Q	E	F	D	L	P	S	L	R	V	-	-	-	-	-	-	-	-	-	-	E	L	V	A	A	N	A	A	G	Q	Q	S	A	G	Q	Y	A	g829179				
147	P	E	R	E	E	L	-	I	Q	S	V	L	A	Q	V	A	E	-	-	-	-	-	-	Q	F	S	R	A	F	K	I	N	E	L	K	A	E	-	-	V	A	PDE9A	
239	R	R	K	G	S	L	D	V	K	A	V	A	S	R	A	T	E	V	S	S	Q	R	R	H	S	S	M	A	R	I	H	S	M	T	I	E	A	P	I	T	PDE8A		
136	R	S	R	S	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	g829179				
179	N	H	L	A	V	L	E	K	R	V	E	-	-	-	-	-	-	-	-	-	-	-	L	E	G	L	K	V	V	E	I	E	K	C	K	S	D	I	PDE9A				
279	K	V	I	N	V	I	N	A	A	Q	E	S	S	P	M	P	V	T	E	A	L	D	R	V	L	E	I	L	R	T	E	L	Y	S	P	Q	F	G	A	PDE8A			
153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	g829179				
206	K	K	-	-	-	-	-	-	-	-	-	M	R	E	E	L	A	A	R	S	S	R	T	N	C	P	C	K	Y	S	F	L	D	N	H	K	K	L	T	P	R	R	PDE9A
319	K	D	D	P	H	A	N	D	L	V	G	G	L	M	S	D	G	L	R	R	L	S	G	N	E	Y	V	L	S	T	K	N	T	Q	M	V	S	S	N	PDE8A			
172	-	-	E	T	P	R	E	N	E	L	-	G	T	L	L	G	E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	g829179				
239	D	V	P	T	Y	P	K	Y	L	L	S	P	E	T	I	E	A	L	R	K	P	T	F	D	V	W	L	W	E	P	N	E	M	-	-	-	-	-	-	PDE9A			
359	I	I	T	P	I	S	L	D	D	V	P	P	R	I	A	R	A	M	E	N	E	E	Y	-	-	W	D	F	D	I	F	E	L	E	A	A	T	H	N	R	PDE8A		
186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	W	G	I	Q	I	F	S	I	G	E	F	S	V	N	R	g829179		

FIGURE 2B



272	-	L	S	C	L	E	-	H	M	Y	H	D	L	G	L	V	R	D	F	S	I	N	P	V	T	L	R	R	W	L	F	C	V	H	D	N	Y	-	R	N	PDE9A
397	P	L	I	Y	L	G	L	K	M	F	A	R	F	G	I	C	E	F	L	H	C	S	E	S	T	L	R	S	W	L	Q	I	I	E	A	N	Y	H	S	PDE8A	
204	P	L	T	C	V	A	Y	T	I	F	Q	S	R	E	L	T	S	L	M	I	P	P	K	T	F	L	N	F	M	S	T	L	E	D	H	Y	V	K	D	g829179	
309	N	P	F	H	N	F	R	H	C	F	C	V	A	Q	M	M	Y	S	M	V	W	L	C	S	L	Q	E	K	F	S	Q	T	D	I	L	I	L	M	T	A	PDE9A
437	N	P	Y	H	N	S	T	H	S	A	D	V	L	H	A	T	A	Y	F	L	S	K	E	R	I	K	E	T	L	D	P	I	D	E	V	A	A	L	I	A	PDE8A
244	N	P	F	H	N	S	L	H	A	A	D	V	T	Q	S	T	N	V	L	L	N	T	P	A	L	E	G	V	F	T	P	L	E	V	G	A	L	F	A	g829179	
349	A	I	C	H	D	L	D	H	P	G	Y	N	N	T	Y	Q	I	N	A	R	T	E	L	A	V	R	Y	N	D	I	S	P	L	E	N	H	H	C	A	V	PDE9A
477	A	T	I	H	D	V	D	H	P	G	R	T	N	S	F	L	C	N	A	G	S	E	L	A	I	L	Y	N	D	T	A	V	L	E	S	H	H	A	A	L	PDE8A
284	A	C	I	H	D	V	D	H	P	G	L	T	N	Q	F	L	V	N	S	S	E	L	A	L	M	Y	N	D	E	S	V	L	E	N	H	H	L	A	V	g829179	
389	A	F	Q	I	L	A	E	P	E	-	C	N	I	F	S	N	I	P	P	D	G	F	K	Q	I	R	Q	G	M	I	T	L	I	L	A	T	D	M	A	R	PDE9A
517	A	F	Q	L	T	G	D	D	K	-	C	N	I	F	K	N	M	E	R	N	D	Y	R	T	L	R	Q	G	I	I	D	M	V	L	A	T	E	M	T	K	PDE8A
324	A	F	K	L	L	Q	N	Q	G	-	C	D	I	F	C	N	M	Q	K	K	Q	R	Q	T	L	R	K	M	V	I	D	I	V	L	S	T	D	M	S	K	g829179
428	H	A	E	I	M	D	S	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E	PDE9A		
557	H	F	E	H	V	N	K	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E	PDE8A		
363	H	M	S	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	g829179			

FIGURE 2C

449	H	M	T	L	L	K	M	I	L	I	K	C	C	D	I	S	N	E	V	R	P	M	E	V	A	E	P	W	V	D	C	L	L	E	E	Y	F	M	Q	S	PDE9A	
597	N	R	T	L	I	K	R	M	L	I	K	C	A	D	V	S	N	P	C	R	P	L	Q	Y	C	I	E	W	A	A	R	I	S	E	E	Y	F	S	Q	T	PDE8A	
392	D	R	I	Q	V	L	E	N	L	V	H	C	A	D	L	S	N	P	T	K	P	L	P	L	Y	K	R	W	V	A	L	L	M	E	E	F	F	L	Q	G	g829179	
489	D	R	E	K	S	E	G	L	P	V	A	-	P	F	M	D	R	D	K	V	T	K	A	T	A	Q	I	G	F	I	K	F	V	L	I	P	M	F	E	T	PDE9A	
637	D	E	E	K	Q	Q	G	L	P	V	M	-	P	V	F	D	R	N	T	C	S	I	P	K	S	Q	I	S	F	I	D	Y	F	I	T	D	M	F	D	A	PDE8A	
432	D	K	E	R	E	S	G	M	D	I	S	-	P	M	C	D	R	H	N	A	T	I	E	K	S	Q	V	G	F	I	D	Y	I	V	H	P	L	W	E	T	g829179	
528	V	T	K	L	F	P	M	V	E	I	M	L	Q	P	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	PDE9A			
677	W	D	A	F	-	-	D	L	P	D	L	M	Q	H	L	D	N	N	F	K	Y	W	K	G	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	PDE8A		
471	W	A	S	L	V	H	P	D	A	Q	D	I	L	D	T	L	E	E	N	R	D	Y	Y	Q	S	M	I	P	P	S	P	P	S	G	V	D	E	N	P	g829179		
545	-	E	S	R	D	R	Y	E	-	E	L	K	R	I	D	D	A	-	M	K	E	L	Q	K	K	T	D	S	L	-	-	-	-	-	-	-	-	T	S	G	A	PDE9A
701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	D	E	M	K	L	R	N	L	R	P	P	P	E	-	-	-	-	-	-	-	-	-	PDE8A		
511	Q	E	D	R	I	R	F	Q	V	T	L	E	E	S	D	Q	E	N	L	A	E	L	E	E	G	D	E	S	G	G	E	T	T	T	G	T	T	G	T	g829179		
575	T	E	K	S	R	E	R	S	R	D	-	-	-	-	-	-	-	-	V	K	N	S	E	G	D	C	A	-	-	-	-	-	-	-	-	-	-	-	-	PDE9A		
713	T	A	A	S	A	L	R	A	G	G	G	G	G	G	G	G	G	M	A	P	R	T	G	C	Q	N	Q	P	Q	H	G	G	M	-	-	-	-	-	-	PDE8A		
551	T	A	A	S	A	L	R	A	G	G	G	G	G	G	G	G	G	M	A	P	R	T	G	C	Q	N	Q	P	Q	H	G	G	M	-	-	-	-	-	-	g829179		

FIGURE 2D

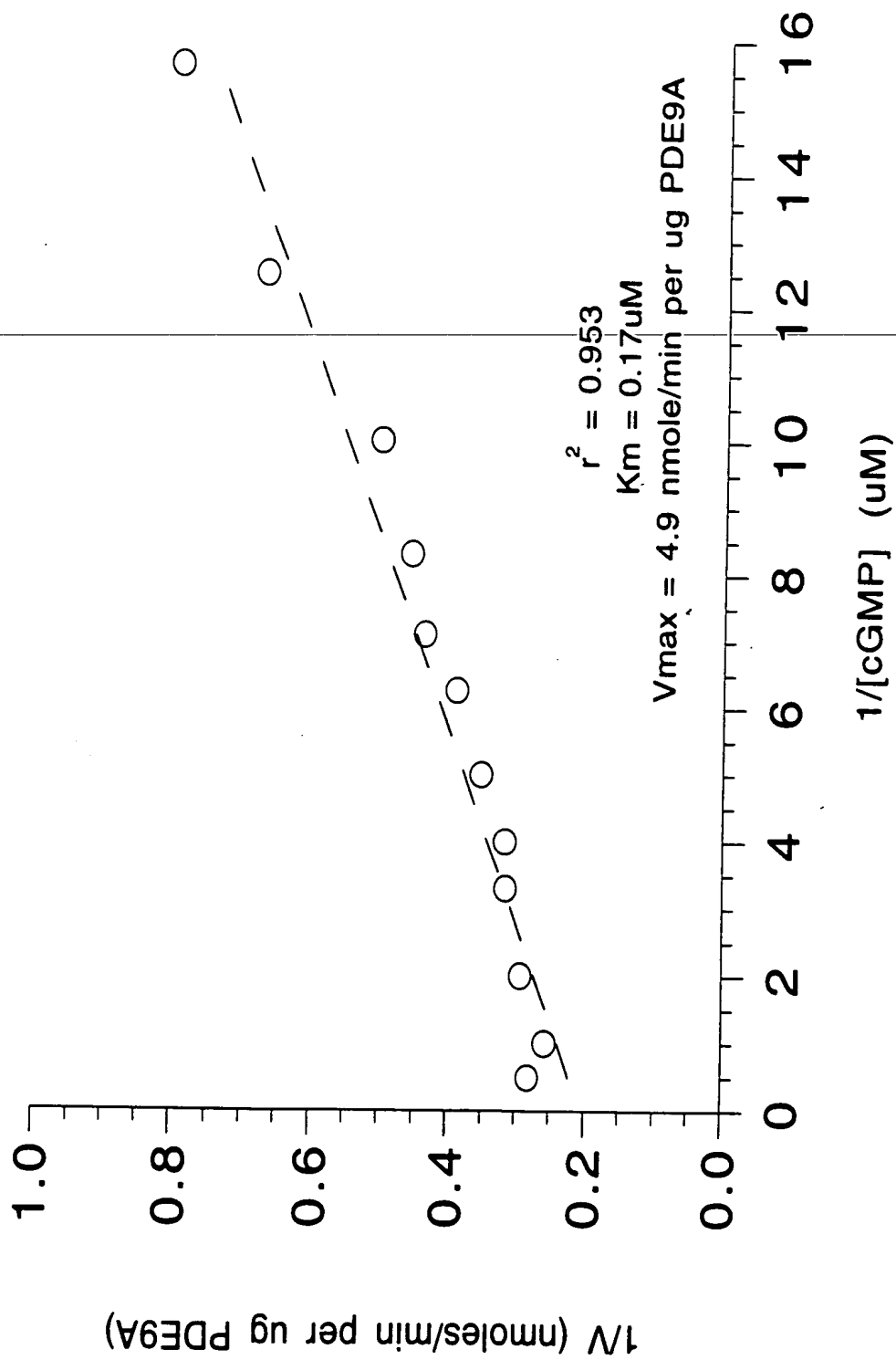


FIGURE 3

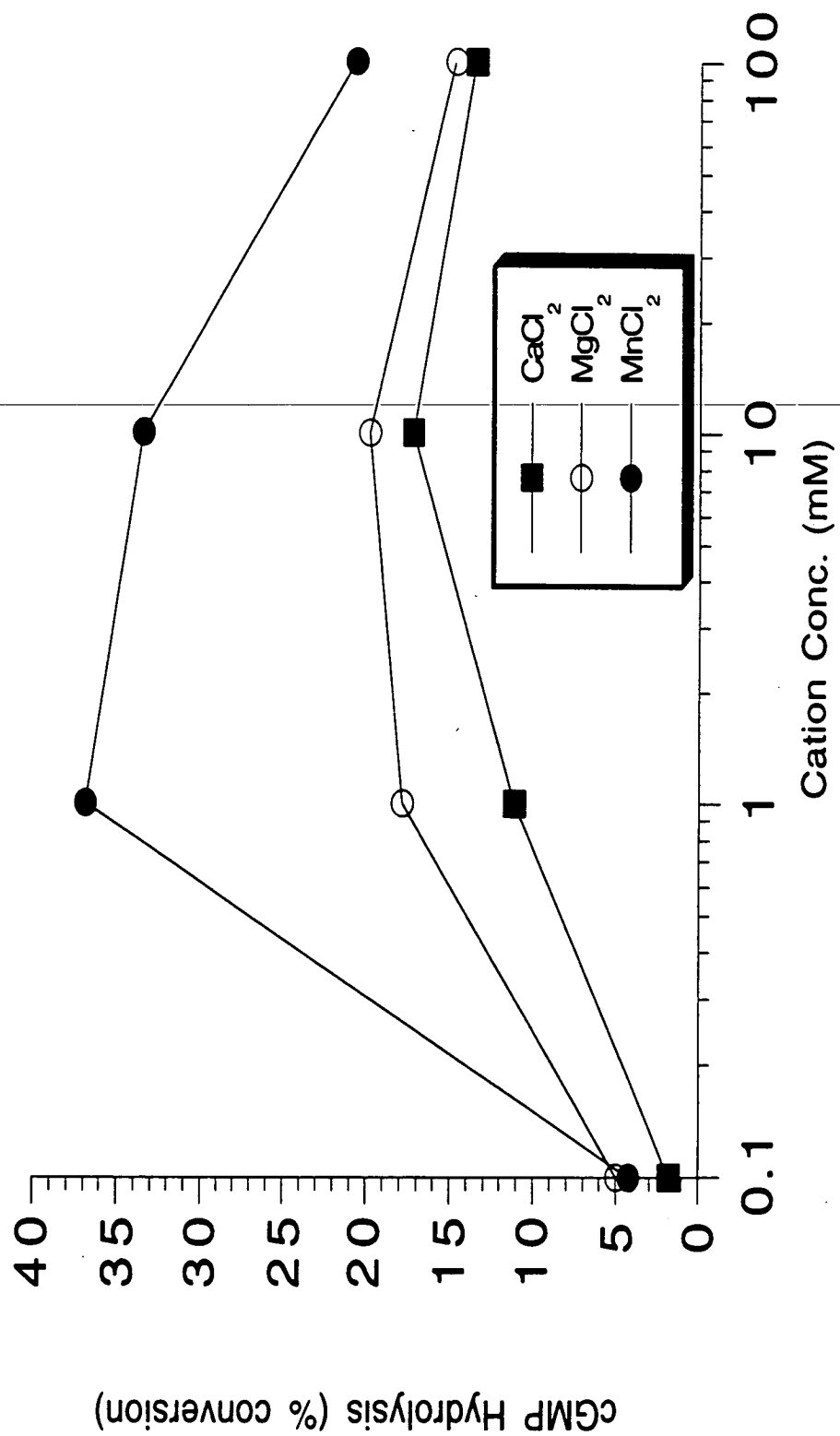


FIGURE 4

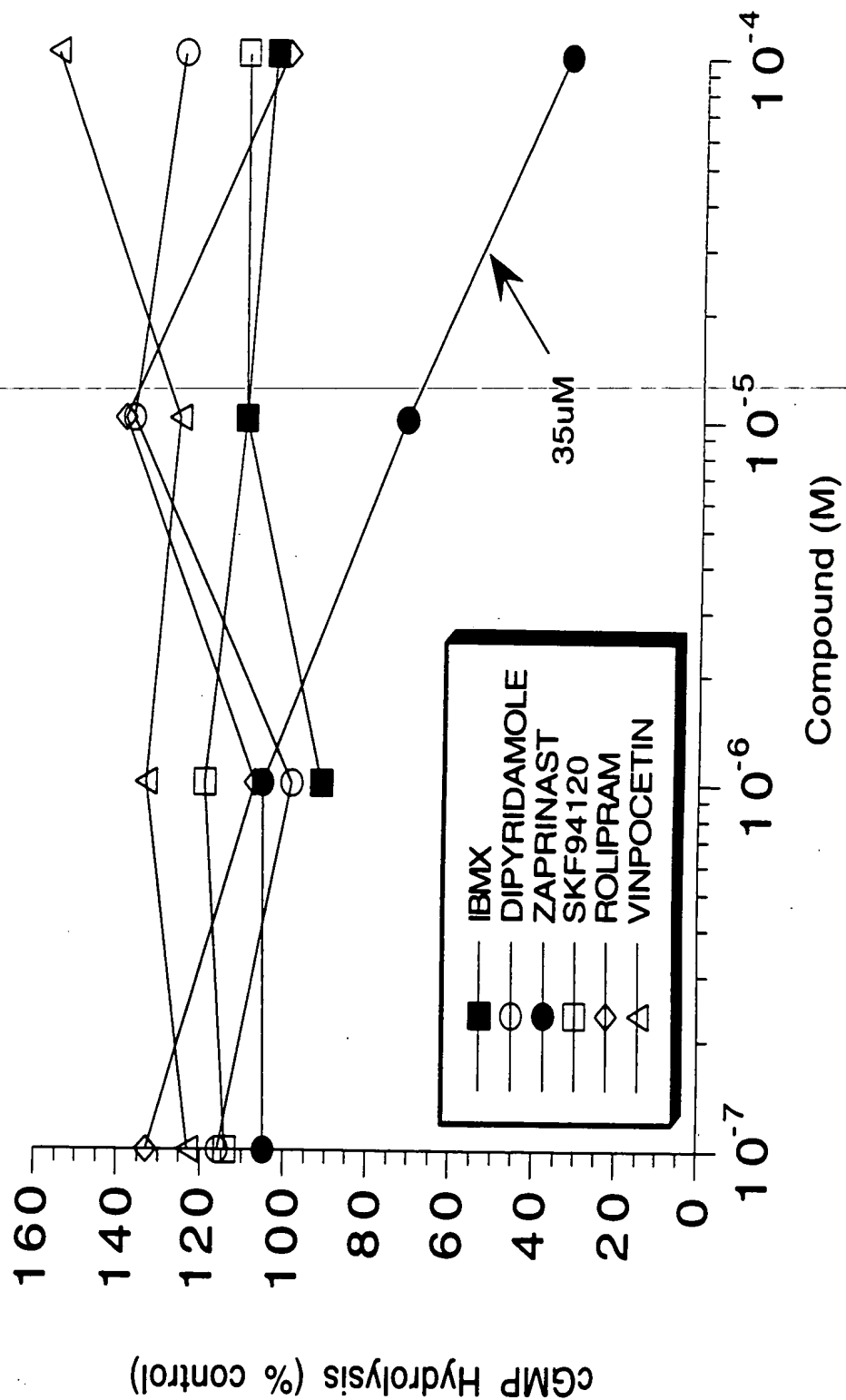


FIGURE 5